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ABSTRACT

Increasing numbers of parents, educators, and legislators have questioned whether half-day kindergarten schedules are adequate to prepare children for the first grade, particularly since full-day kindergartens are being offered in some public and nonpublic schools. This report, one of several background papers for a comprehensive policy study of early childhood education, identifies and defines the different types of kindergarten schedules being used in Illinois school districts and reviews research which identifies the effects that different types of schedules have on student outcomes, especially those related to achievement or readiness measures. Specifically addressed in the report is a comparison between half-day, alternate day, and full-day kindergarten programs. In addition, the findings are summarized and discussed in terms of policy implications in Illinois. The report excludes issues of cost or facility. Half-day kindergartens predominate in Illinois; however, an examination of scheduling during recent years reveals an increase in participation in alternate day and full-day schedules. The 1984-85 data from the State Board of Education records show that 2,431 public schools operate a kindergarten program. Of these, approximately 87 are half-day, 5 are alternate day, and 8 are full-day programs. The summary reviews the advantages and disadvantages of each program with strong support being given to full-day schedules. Reasons for adoption of a full-day schedule are: to meet the needs of disadvantaged students or those not academically ready who can benefit from extra preparation for first grade, to provide an enrichment program for advanced or gifted children, and to reduce transportation costs. (DST)

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# KINDERGARTEN SCHEDULES: STATUS OF PATTERNS IN ILLINOIS AND A REVIEW OF RESEARCH

ILLINOIS STATE BOARD OF EDUCATION

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Department of Planning, Research, and Evaluation

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## Foreword

This paper on kindergarten schedules is one of several background papers written in conjunction with the Early Childhood Education policy study conducted by staff of the State Board of Education. The interpretation and conclusions expressed herein do not necessarily reflect the position or policy of the State Board of Education. The paper was prepared by Edith Helmich, M.A., Research and Statistics Section, State Board of Education.

Ted Sanders
State Superintendent of Education

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## Purpose

Kindergarten is the first year of school that public schools are required to offer to children. The effectiveness of the kindergarten program is typically evaluated on the basis of the readiness children exhibit for academic studies which are initiated in the first grade. In recent years, increasing numbers of parents, educators, and legislators have questioned whether half-day kindergarten schedules are adequate to prepare children for the first grade, particularly since full-day kindergartens are being offered in some public and nonpublic schools.

This report will identify and define the different types of kindergarten schedules being used in Illinois school districts and review the research to identify the effects that different types of schedules have on student outcomes, particularly those related to achievement or readiness measures. Finally, the findings will be summarized and discussed in terms of implications in Illinois. This report excludes issues of cost or facility use since these considerations would be more appropriate after the educational benefits of different schedules have been determined.

## Types of Kindergarten Schedules

All Illinois public school districts are required by statutes to offer a kindergarten program (The School Code, 10-20.19a and 18-8 (k)). Three different types of kindergarten schedules are currently being used: half-day, everyday; all day on alternate-days; and full-day, everyday. Using a half-day, everyday schedule means that children attend kindergarten for two and a half hours either during the morning or the afternoon five days a week. Under the all day, alternate-day kindergarten schedule, children attend school all day (five hours) on alternate-days. Usually this means that children will go to school three days on one week (Monday, Wednesday, and Friday) and two days the following week (Tuesday and Thursday). The pattern is then repeated in subsequent weeks. Children attending full-day, everyday kindergartens, of course, attend school all day, five days a week. For the remainder of this report, the three schedules will be referred to as half-day, alternate-day, and full-day kindergartens, respectively.

Half-day kindergartens predominate in Illinois. An examination of scheduling during recent years, however, reveals an increase in participation in alternate-day and full-day schedules. The 1984-85 data from State Board of Education records show that 2,431 public schools operate a kindergarten program. Of these, approximately 87% are half-day, 5% are alternate-day, and 8% are full-day programs.

Table 1 shows that during 1984-85, 138,618 children were enrolled in public school kindergartens. Another 25,822 children attended kindergarten in nonpublic schools. Total enrollment in public schools has been steadily declining from 1979-80 to 1984-85 (a decrease of 210,246), but kindergarten enrollment has increased by 4,317. Total enrollment in nonpublic schools has also decreased during the last five years (a decrease of 7,308) while

kindergarten enrollment increased by 8,000 for the same time period. Public schools accounted for 88.4% of all kindergarten students in 1979-80 and 84.3% of all kindergarten students in 1984-85, a decrease of 4.1%. Likewise, 11.6% of all Illinois kindergarten children attended nonpublic schools in 1979-80 and 15.7% attended nonpublic schools in 1984-85, an increase of 4.1%. This means that the proportion of the total kindergarten population attending public schools has shown a small but steady decrease during the past six years, while the proportion attending nonpublic schools has increased. Enrollments in nonpublic kindergartens have increased 47% in the last five years.

Table 1: Changes in Kindergarten Enrollment in Illinois Schools From 1979-80 to 1984-85: Public and Nonpublic

| SCHOOL YEAR | K - 12 ENROLLMENT | K ENROLLMENT | CHANGE FROM PRIOR YEAR | CHANGE PERCENT | PUBLIC % OF K |
|---|---|---|---|---|---|
| | | PUBLIC KINDERGARTEN | | | |
| 1979-80 | 2,018,907 | 134,302 | -3,423 | -2.5% | 88.4% |
| 1980-81 | 1,959,498 | 133,020 | -1,282 | -1.0% | 86.8% |
| 1981-82 | 1,899,786 | 130,450 | -2,570 | -1.9% | 86.0% |
| 1982-83 | 1,856,087 | 134,864 | +4,414 | +3.4% | 85.5% |
| 1983-84 | 1,827,685 | 132,221 | 2,643 | -2.0% | 84.7% |
| 1984-85 | 1,808,661 | 138,618 | +6,397 | +4.8% | 84.3% |
| | | NONPUBLIC KINDERGARTEN | | | NONPUB % OF K |
| 1979-80 | 341,327 | 17,581 | +943 | +5.7% | 11.6% |
| 1980-81 | 342,108 | 20,276 | +2,695 | +15.3% | 13.2% |
| 1981-82 | 340,616 | 21,304 | +1,028 | +5.1% | 14.0% |
| 1982-83 | 339,708 | 22,912 | +1,608 | +7.5% | 14.5% |
| 1983-84 | 336,906 | 23,868 | +956 | +4.2% | 15.3% |
| 1984-85 | 334,019 | 25,822 | +1,954 | +8.2% | 15.7% |

Source: Public School Enrollment and Housing Report, and Nonpublic Registration, Enrollment and Staff Report, Reseach and Statistics Section, Illinois State Board of Education.

## Half-day programs

Approximately 770 or 87% of the elementary and unit districts in Illinois offered half-day kindergartens in 1984-85. These districts held half-day kindergarten in 2,112 schools and enrolled 119,791 students. These numbers, however, represent a decrease of 54 districts, 401 schools, and 7,870 students enrolling in the half-day kindergarten from 1980-81. (See Table 2.)

Table 2: Changes in Kindergarten Half-day Scheduling: 1980-81 to 1984-85

| Year | No. of Districts | No. of Schools | No. of Students |
|---|---|---|---|
| 1980-81 | 824 | 2,513 | 126,842 |
| 1981-82 | 806 | 2,419 | 123,114 |
| 1982-83 | 786 | 2,337 | 125,416 |
| 1983-84 | 775 | 2,189 | 117,457 |
| 1984-85 | 770 | 2,112 | 119,781 |
| (Net Change) | (-54) | (-401) | (-7,061) |

Source: Public School Fall Enrollment and Housing Report, Research and Statistics Section, Illinois State Board of Education.

One reason for the predominance of half-day programs is that local school districts are required by statute to offer kindergarten programs (The School Code, 10-20.19a), and to limit attendance to half-days (The School Code, 18-8 (k)). The law states:

> A recognized kindergarten shall not have more than 1/2 day attendance counted in any 1 day. However, kindergartens may count 2 1/2 days of attendance in any 5 consecutive school days. Where a kindergarten pupil attends school for 2 half days on any one school day, such pupil shall have the following day as a day absent from school, unless the school district obtains permission in writing from the State Superintendent of Education.

While this law allows exceptions to the half-day attendance limitation, local districts must request permission for a full-day kindergarten and be granted permission by the State Superintendent. This process suggests that exceptions to the half-day kindergarten may not be acceptable and, thus, may serve as a barrier to requests and provide at least a partial explanation for the large proportion (87%) of half-day programs in Illinois.

The half-day kindergarten schedules were established because they provided children with a gradual transition from home to school. Belgrad (1984) recently stated that the purpose of kindergarten was to present the larger world to the child in preparation for first grade--to serve as "a social and educational vehicle to absorb the child from the home into the larger society." Such views, however, are being challenged by recent changes in American families. Data from the 1980 U.S. Census for Illinois report that approximately half of entering kindergarten students have already experienced one or more years of group instructional experience, i.e., preschool. This is not surprising since the U.S. census data also show that approximately 50% of women with children under five years of age are in the labor force and must make arrangements for the supervision and care of their children. This means that the transition from home to a full-day group

setting occurs much sooner than previously thought and that a half-day transition year in kindergarten to prepare for first grade may no longer be adequate.

All research studies examining effectiveness focused on the half-day kindergarten in comparison to variations of all day programs. Several researchers found that the half-day schedule was as beneficial to children's school success as the alternative-day program (Stinard, 1982; McClinton and Topping, 1981; Ulrey, et. al., 1982). No research studies were found that reported that the half-day programs were more beneficial than full-day programs. This finding is particularly important since it challenges the position that children cannot adapt to a program longer than a half-day, that they will become so fatigued that achievement will decline. Numerous studies found the half-day schedule to be less effective than full-day kindergartens. An examination of these studies (Stinard, 1982; Harman, 1984; DeRosia, 1980; Nieman and Gastright, 1981; and others) will be included in the discussion of full-day schedules.

Alternate-day programs

Alternate-day kindergartens are a relatively recent phenomenon. Exceptions to the half-day kindergartens were so infrequent in past years that the State Board did not begin to collect data on the types of kindergarten schedules until the 1980-81 school year. Prior to that year, kindergartens were assumed to have half-day schedules. The number of districts and schools with alternate-day kindergarten scheduling doubled from 1980-81 to 1984-85. (See Table 3.) One hundred and three public school districts (10%), an increase of 64, operated alternate-day kindergartens in 1984-85. The 103 programs were offered in 128 schools and enrolled 4,895 children.

Table 3: Change in Kindergarten Alternate-Day Scheduling: 1980-81 to 1984-85

| Year | No. of Districts | No. of Schools | No. of Students |
|---|---|---|---|
| 1980-81 | 54 | 64 | 2,384 |
| 1981-82 | 72 | 90 | 3,258 |
| 1982-83 | 93 | 116 | 4,562 |
| 1983-84 | 99 | 124 | 4,987 |
| 1984-85 | 103 | 128 | 4,895 |
| (Net Change) | (+49) | (+64) | (+2,511) |

Source: Public School Fall Enrollment and Housing Report, Research and Statistics Section, Illinois State Board of Education.

The most frequent reason given by district administrators for adopting this schedule was to save money on transportation costs. By having students attend school all day on alternate-days, costs of transporting children to and from school during mid-day were eliminated. Saving money, however, was not the only reason districts adopted alternate day kindergarten schedules. This type of scheduling allows children more time to participate in the total school program, acquire better work habits for first grade, and better adjust to school lunch programs and the gymnasium for entry into first grade. In addition, there is more instructional time during the school day since proportionately less time is spent on daily routine activities such as roll call, reciting the pledge of allegiance, getting coats and boots on and off, washroom visits, etc. (Pigge and Smith, 1979).

Stinard (1982) identified eight studies which compared students in half-day programs with students in alternate-day programs. He stated that "when the results are reviewed study by study, the overall picture is quite ambiguous". However, when comparison results were aggregated, the findings were quite different. Stinard concluded:

> Across all eight studies there were 56 comparisons of academic achievement. Of these 43 percent statistically favored. . . alternate-days, 16 percent favored half-day. . .and 41 percent resulted in no significant difference.... All told, 18 socio-emotional comparisons were reported and of these, 17 percent statistically favored. . .alternate-days, 11 percent favored half-day. . .and 72 percent of the comparisons indicated no significant differences.

Stinard reported that more studies found the alternate-day schedule effective than the half-day schedule in producing academic effects. However, scheduling had very little effect on the socio-emotional dimension. Rather than state that one type of scheduling was superior to the other, Stinard concluded that "the evidence clearly indicates that the ...alternate day does not result in reduced achievement or socio-emotional adjustment".

Ulrey, et. al., (1982) studied two school districts to assess the effects of changing the kindergarten school day. Half-day and alternate-day kindergartens were compared. The researchers found no significant differences between the groups on measures of school achievement or teacher reports of classroom behavior. Given that the same amount of time was available, this finding is not unexpected.

The alternate-day kindergarten is not without its critics, however. Some parents and teachers believe that five year old children cannot cope with the long school day and that problems occur as a result of fatigue. Other concerns include the belief that children have trouble adjusting their sleep patterns, this schedule breaks the continuity and daily reinforcement used by teachers in their instructional strategies, and absences for illness or other reasons have a double impact because of the increased time between class days (Pigge and Smith, 1979).

Illinois administrators in school districts using the alternate-day kindergarten schedule said that teacher and parent reactions were mixed, particularly at the onset of alternate-day schedules. Initial apprehension on the part of parents and teachers was followed by general acceptance once routines and teaching strategies had been adjusted. In fact, most parents liked the alternate-day scheduling because of the convenience provided to them when planning their own time. Numerous research studies report similar findings of initial parental apprehension followed by enthusiastic support for all day kindergarten programs (Hebbeler, 1983; Evansville-Vanderburgh School Corp., 1983; Salzar, 1982).

One district administrator reported having conducted a formal follow-up on the success of the kindergarten students in first grade or later. All district administrators contacted had conducted informal evaluations, however, by interviewing teachers and parents. These evaluations indicated children participating in an alternate-day kindergarten had done at least as well as children who had previously been in half-day kindergartens.

Full-day programs

Local school boards adopt full-day kindergarten schedules for many of the same reasons that some boards adopt alternate-day schedules. Teachers and administrators who support full-day schedules report that the all day kindergarten provides more time for the "variety of educational activities necessary to meet the different academic, social, emotional, and physical needs of each child" (Herman, 1984). The full-day schedule provides longer periods of uninterrupted time for learning, more time to identify and address children's needs and interests, and more time for the development of social relationships. Because a high number of preschool students now attend day care centers or nursery schools, it is believed that most five year olds are ready for a full-day kindergarten program (Herman, 1984). A 1984 staff survey of Illinois schools with kindergarten programs showed that almost 50% of the principals (both public and nonpublic) reported that their kindergarten curriculum had been modified to some extent because of the readiness differences between children with preschool instructional group experiences and those without such experiences. There is evidence that many children are entering school with more experience outside the home environment than was true for children of past generations. Finally, transportation costs are reduced since children are not transported mid-day and can ride regularly scheduled school buses.

As shown in Table 4, full-day kindergartens have increased from 1980-81 to 1984-85. While there are only 18 districts (2 percent) that have full-day kindergartens in 1984-85, there are 130 more schools (a total of 191) and 10,176 more students (a total of 13,942) participating in this type of scheduling than in 1980-81. Eight of these districts offer full-day programs to all of their kindergarten children. These schools and students represent more than three times the number of schools and students participating in full-day kindergartens five years earlier. The increased number of schools with full-day kindergartens occurred primarily in the cities of Chicago and East St. Louis.

Table 4: Changes in Kindergarten Full-day Scheduling: 1980-81 to 1984-85

| Year | No. of Districts | No. of Schools | No. of Students |
|---|---|---|---|
| 1980-81 | 16 | 61 | 3,766 |
| 1981-82 | 20 | 67 | 4,078 |
| 1982-83 | 16 | 75 | 4,700 |
| 1983-84 | 17 | 140 | 9,777 |
| 1984-85 | 18 | 191 | 13,942 |
| (Net Change) | (+2) | (+130) | (+10,176) |

Source: Public School Fall Enrollment and Housing Report, Research and Statistics Section, Illinois State Board of Education.

In order to compare Illinois data to national data, the National Center for Educational Statistics was contacted. The latest statistics indicate that, in 1982, 31% of all U.S. students enrolled in public kindergartens were attending full-day programs (National Center for Educational Statistics, 1985). In Illinois, only 10% of public school kindergarten children were enrolled in full-day programs in 1984. These programs were located in the following school districts (See Table 5):

Table 5: Public School districts with Full-day Kindergarten Schedules

Amboy C.U. School District 272
Central Stickney School District 110
Champaign C.U. School District 4
City of Chicago School District 299
Diamond Lake School District 76
Downers Grove Grade School District 58
East Prairie School District 73
East St. Louis School District 189
Department of Rehabilitation Services
(Illinois School for the Deaf)
Evanston C.C. School District 65
Hazel Crest School District 152-5
Niles Elementary School District 71
North Chicago School District 64
Pembroke C.C. School District 259
Pope County C.U. District 1
Prairie-Hills Elementary School District 144
Salt Creek School District 48
Waukegan C.U. School District 60

Source: Public School Fall Enrollment and Housing Report, Research and Statistics Section, Illinois State Board of Education.

Illinois school administrators with full-day kindergarten in their districts identified two major reasons for adopting the schedule: to provide additional instruction to children whose performance was behind their peers and to provide enrichment programs for children whose readiness skills were above average. Administrators in these districts had identified a sizeable number of incoming children who needed more instructional time to develop readiness skills for first grade. The administrators reported that the programs were effective. In one district it was estimated that between 50 and 100 children would not have succeeded in first grade without the full-day kindergarten.

Recent studies have been conducted which compare the effects of half-day and full-day kindergarten. DeRosia (1980) conducted a study to determine if holding kindergarten full-day made a difference in the acquisition of basic concepts, social development, and on reading achievement of first and second grade children who had been enrolled in full-day kindergarten classes. She found that there was a statistically significant difference on measures of concept development favoring those children in full-day programs. These effects were not sustained in terms of academic performance in grades one and two.

Sustaining effects were found in a later study, however. Nieman and Gastright (1981) reported that an eight-year follow-up study of 410 disadvantaged children favored full-day programs. Effects were apparent after only three months. Full-day scheduled students scored significantly higher than their half-day counterparts on both the Boehm Test of Basic Concepts and the Metropolitan Readiness Test. Significant differences in achievement in mathematics and reading through grades four and eight favored the children who had attended full-day kindergarten.

A comprehensive review of research on the effects of different kinds of scheduling on kindergarten children was conducted by Stinard in 1982. Stinard examined research conducted within the last ten years that compared academic readiness for first grade and socio-emotional development of kindergarten children in different programs. He purposely excluded studies comparing parent and teacher attitudes as well as studies which focused only on disadvantaged or lower-achieving children. He reviewed only those studies measuring student outcomes and those which were more likely to be generalized to a larger population. Stinard reported on eight studies which compared children in half-day programs with children in full-day programs. Regarding academic achievement, he found that:

> Across all studies, there were 33 comparisons. Of these, 85 percent statistically favored full-day. . .none favored half-day. . .and 15 percent resulted in no significant difference.

Herman (1984) reviewed 15 studies, four of which reported finding academic differences for children as a result of different types of schedules for kindergarten. The academic areas assessed varied. However, three of these studies had a common finding: reading readiness was improved for children in the full-day kindergartens.

Harman (1982) studied two groups of children to determine if students in a full-day kindergarten would score higher on the California Achievement Test than students in a half-day kindergarten. Students in the full-day kindergarten did, in fact, score higher in reading and math, but the results were not statistically significant.

Children deficient in readiness skill development were studied by Warjanka (1982). The children in the study demonstrated low performance in auditory memory, rhyming, letter recognition, visual matching, school language and listening, and quantitative language as measured by the Metropolitan Readiness Test. The purpose of the study was to determine if the length of the school day affects the academic achievement of the children whose readiness was considered deficient. One group of children, identified as not having deficiencies, attended a half-day kindergarten and one group, identified as having deficiencies, attended a full-day kindergarten. Warjanka found that readiness deficient children in the full-day kindergarten had achieved the level of readiness skill development of the children in the half-day kindergarten. Full-day programs were found to benefit children who were identified as having deficiencies in readiness skills.

The second reason reported by Illinois administrators for adopting a full-day kindergarten schedule was to meet the needs of those children who were well ahead of most kindergarten students. Some children had been identified as developmentally ready for a more enriched program than that offered in the half-day kindergarten. In these instances, the full-day kindergarten was seen as an enrichment program designed to meet the needs of gifted students or those who were obviously ready for a different type of kindergarten experience. Administrators reported that these programs have been successful.

The opportunities for developing academic readiness in a full-day kindergarten program was reported to be strongly supported by parents and teachers by Hebbeler (1983). In the late 1970s, schools in a Maryland county participated in a pilot project that offered children one of two opportunities: entry into first grade at age five, or participation in a full-day program that combined kindergarten and first grade curriculum. Few participating children actually reached achievement levels sufficient to enter second grade by the end of the year, but the participants of the full-day kindergarten/first grade program for five year olds were rated significantly higher than half-day kindergarten peers in both academic and social development. So many parents were supportive of the program that "waiting lists" were required for the combined kindergarten/first grade classes.

McClinton and Topping (1981) investigated the achievement differences between children who attended a full-day kindergarten and those who attended a traditional half-day program. Curriculum content was controlled so that the programs differed only in the amount of time children attended daily classes. No significant differences were found in achievement levels of the two groups either at the end of kindergarten or first grade. First grade teachers' opinions, however, were that the children who attended full-day were more capable students than those from the half-day programs. Unfortunately, this study did not describe the socio-economic level of the

participants or discuss the effects of the limited curriculum in the full-day program and, as a result, it reports only that time is not a sufficient variable for an effect on achievement. The positive reaction of first grade teachers to the full-day students may reflect better school adjustment or work habits, but this is not discussed and can only be speculated.

The Evansville-Vanderburgh School Corporation in Indiana (1983) began full-day kindergarten in four schools in January of the 1978-79 school year. The children in these four schools, from both the 1978-79 and the 1979-80 programs, were compared with children in half-day kindergartens in four other schools matched on socio-economic status. A study was designed to re-assess the children in 1982 to determine if there were any long-term benefits from full-day kindergarten programs. Only children who remained in the same school were included in the study. These children were then in third and fourth grades. A variety of measures were used to compare student performance: four standardized tests, one criterion-referenced test, report card information, teacher and parent opinionnaires, and a questionnaire and interview with students. The evidence overwhelmingly showed that the full-day kindergarten produced substantial long-term benefits. The children who attended full-day kindergarten, now in the third and fourth grades, had consistently better academic and conduct marks, and their standardized test scores were higher. Further, those children who had attended full-day kindergarten had a substantially lower rate of being retained in grade.

Nearly all the parents (95%) stated that their children learned more and were better prepared for first grade as a result of full-day kindergarten. Further, in the fall of 1982, the parents of 700 kindergarten children were given a choice of full-day or half-day programs for their children. Of these, 99% chose full-day and 1% chose half-day programs.

Primary teachers in grades one, two and three in schools with full-day kindergartens were supportive of the program, with first grade teachers being the most supportive. Teachers agreed that there was more time to develop basic listening and language skills, that children were not bored, and that they were exposed to a more indepth skills program. There was less agreement with statements that children in full-day kindergartens socialized better and were more excited about coming to school.

The third and fourth grade children who had previously participated in full-day kindergarten were interviewed and given a questionnaire. There was no attempt to compare attitudes between the groups that had been enrolled in full-day or half-day kindergartens. The purpose of the assessment was to determine if the children who attended full-day kindergartens had positive memories about their kindergarten experience. The results indicated that this was indeed the case. Play, painting, and group activities were listed most frequently by the children as what they remembered most about kindergarten.

Attitudinal surveys of middle-class parents' feelings about all-day kindergarten were reported by Salzar (1982). The surveys were reported to have a majority (60% to 70%) of parents in favor of full-day programs, compared to a minority (30% to 40%) who were opposed. Responses appeared to

cluster around several opposing views: One, those who believe that many children have already had preschool experiences and, thus, need and are ready for a full-day kindergarten program vs. those who believe that a full-day program is too tiring or demanding for children of kindergarten age; Two, those who believe there is a need to replace the current 1/2 day kindergarten and 1/2 day child care arrangement with a less fragmented, full-day school program vs. those who believe that child care needs should not be met by schools; Finally, those who believe that most children today are ready and able to participate in a more structured academic program in kindergarten vs. those who believe that a full-day program may impose inappropriate academic demands on young children. Salzar further reports that parents who desire full-day programs may be enrolling their children in private schools when public schools are offering the traditional one-half day program. (The evidence in Illinois suggests this may be happening.)

The benefit of full-day kindergarten from a practical perspective is illustrated by a study in New York conducted by the Bay Shore Union Free School District (1983). A local study committee consisting of parents, teachers, administrators and pupil personnel staff (psychologist and speech therapist) studied whether it would be educationally better to have a full-day kindergarten or to remain with the half-day program. The committee found that other districts with full-day programs had full community support, even from those parents who had initially opposed the program. Initial objections were based upon misconceptions of unrealistic academic pressure and inadequate rest time for children. In reality, districts offering full-day programs reported more relaxed curriculum pacing and that very few children needed to sleep during the scheduled rest periods. A survey of Bay Shore Union teachers found that teachers overwhelmingly (90%) supported the initiation of full-day programs for kindergarten children. The teachers collectively reported that the full-day would provide more time for exploring concepts, opportunity for more "hands on" experiences, science and language experiences, motor activities, and field trips. In addition, teachers reported that many children would benefit from the full-day in school because some children either spent the second half of the day in babysitting or day care programs, or in environments providing little intellectual or social stimulation. Based on these findings and a review of the research, the committee unanimously and without reservation recommended the implementation of a full-day kindergarten program for the fall of 1984.

An evaluation of a full-day kindergarten in Southern California was conducted by Anderson (1983). An experimental design matched children in two full-day programs with students in two half-day programs. The children who attended full-day programs were rated higher in student achievement, development of desirable psychological attributes, parent interest and support and teacher endorsement. Although students in both groups exceeded national achievement norms, children in full-day classes achieved significantly higher than children in half-day classes in skills, knowledge, and understanding in reading, mathematics, social studies, and science. In terms of desirable psychological attributes, parents of children who attended full-day programs expressed the belief that a great deal of change occurred in their children more frequently than did parents of children who attended half-day programs. This change included self-confidence, independence, ability to work/play with others and academic learning. Parent support was evidenced by the 69 parents who indicated a preference

for the full-day program compared to 18 parents who continued to show preference for a half-day program. The two teachers who taught full-day programs strongly endorsed the benefits of the program and cited numerous arguments in support of the longer day. Teachers in half-day programs also acknowledged the benefit of more time but felt that the longer day would be tiring for many children. Teachers in full-day programs, however, did not report fatigue as a problem. A final conclusion was that the full-day program potentially can increase enrollment by appealing to working mothers who have children enrolled in private full-day kindergartens.

One school district in Illinois, Evanston School District #65, offers full-day kindergartens in all ten of its elementary schools. These programs have been evaluated several times as part of an on-going longitudinal study. Because of the relevance of the evaluation to other Illinois schools, the findings are of particular importance.

The first evaluation (Evanston, January, 1983) comparing the effects of full-day and half-day kindergartens was conducted after pilot programs in three schools had been in operation for one semester. Findings were positive:

-- Full-day kindergarten groups scored significantly higher scores on phonics, counting and visual discrimination test items.

-- Teachers reported that students in the full-day program required less teacher assistance, were more proficient in completing tasks, had more oral language skills, and had better social communication skills.

-- Principals expressed positive attitudes toward the full-day program in terms of the students' social and academic progress.

-- Parents reported satisfaction with both the learning and school adjustment of their children in the full-day program.

-- The attitudes of children toward their kindergarten experience was measured by a survey. Results showed that children in both full-day and half-day programs reported positive attitudes toward their kindergarten experience and felt that school was "fun."

Some findings were negative. These effects were primarily the result of program design:

-- Children in full-day kindergartens were reported by parents to be tired at the end of the day while the parents of children in half-day kindergartens reported that their children were not tired. Few parents in either group, however, reported that their children were very tired (emphasis cited in the report). Principals also identified fatigue as a problem for children in full day-programs and suggested that better planning for rest time was needed.

-- Principals reported that teachers had little released time during the day and recommended that a full-time aide for each teacher would be beneficial.

-- Finally, although 78% of the children in full-day programs reported that they liked to come to school, this represented fewer children than the 85% of children in half-day programs who reported that they liked to come to school. This difference was statistically significant.

A second evaluation (Evanston, March, 1983) focused on determining whether student outcomes for kindergarten children were related to age, sex, motivation and preschool experience, readiness, and attitudes toward school. The effects of these variables were then compared for the full-day and half-day kindergarten groups. The findings consistently favored the full-day kindergarten group:

-- Where there was an age effect favoring older children within the two groups, both younger and older children in full-day kindergarten performed better than their counterparts in half-day programs. The age effect was less for children in full-day than for those in half-day programs which suggests that the full-day experience helps to equalize age-related work performance differences.

-- The percent of children in full-day kindergarten who liked to come to school increased to 85% from the earlier 78%, while the percent of those in half-day kindergarten decreased to 79%. It appears that as the school year progressed, the attitudes toward school became similar between the two groups.

-- Other variables (such as sex, motivation, preschool experience, etc.) were not found to have a differential effect on the outcomes for children in full-day and half-day kindergartens.

An end-of-the-year report of the pilot program (Evanston, October, 1983) was limited to an analysis of student performance on the California Achievement Readiness Test. Data were analyzed in two ways: Average percentile ranks for children in full-day and half-day programs, and the percent of children in full-day and half-day programs falling in the lowest quartile (stanines 3 or below). A difference of 12 percentile points in pre-reading skills and 8 percentile points in math skills favored the full-day group. Comparing the proportions of children who scored in stanines 3 or below revealed striking differences between the groups: While 21% of the children in half-day programs were in the lowest quartile, only 13% and 10%, respectively, of the children in full-day programs scored in the lowest quartile for pre-reading and math. These data suggest a strong effect of the full-day program on children who are deficient in readiness skills.

Continuation of the program and expansion of the number of full-day kindergartens were based on the findings reported thus far. In May of 1984, a kindergarten parent survey (Evanston, August, 1984) was conducted to further assess parents' attitudes toward the full-day program. Parents of children in full-day kindergarten were found to be satisfied with their children's kindergarten experience, felt that their children were learning, and had adjusted well to kindergarten. Overall, parents did not feel that their children were tired after a full school day. Eighty-five percent of the parents indicated that they would recommend full-day kindergarten, 6 percent would not, and 10 percent indicated that a full-day choice depended on the child's preschool experience and maturity.

The most recent evaluation of the program was a follow-up study of children in first grade (Evanston, October, 1984). Participants in the study consisted of 244 first grade students who had participated in the kindergarten pilot study during the 1982-83 school year. National percentile rank equivalents of average scores on the California Achievement Test revealed a statistically significant difference for language and spelling in favor of the children in full-day programs.

The results of extensive evaluation of the Evanston School District's full-day program show that children received more academic benefits from the district's full-day than from half-day kindergartens. Further, parental attitudes were reported to be positive and supportive, which suggests that the social and emotional adjustment of children in full-day kindergartens has been satisfactory. Of the 660 children enrolled in kindergarten in Evanston, the parents of nearly all have selected full day programs for their children.

School personnel in another Illinois district reported petitioning their board for an expansion of the full-day program to all schools (Elk Grove, 1984). In their request, the rationale included several social dimensions. Family changes within the past decade were credited with creating voids between what the home environment provides and the experiences needed for school readiness. Smaller family sizes were believed to have limited play and social activities, television has lessened opportunities for expressive language, and dual-working parents have required daycare services for their children. The full-day kindergarten was believed to allow for an in-depth exploration of skills in the areas of social, emotional, physical, affective, and cognitive development--areas which are not always fostered in the variety of preschool settings where children receive care. Pre-kindergarten testing had shown that children's scores were clustered at either the high or low end of the scale, with few children at the mid-point. Children were entering school with varied maturational levels and experiential backgrounds. The diverse abilities and experiences of today's kindergarteners were believed to require a more comprehensive (full-day) program so that the teachers could focus on the variation in basic skill levels found in this group. Although the school board responded to this petition with increased funding for "Primary Support Services," which includes full-day kindergarten programs, full-day kindergarten programs are still limited to those schools where students are identified as being deficient in readiness skills.

Critics of full-day programs offer a number of arguments. The critics claim that some children may tire in a full-day program. If an all-day program is not varied and stimulating, kindergarten children may become become bored and experience dissatisfaction with their very first school experience (Herman, 1984). Some critics report that adoption of the full-day schedule is an attempt to push children into academics earlier at a time when many children will not be able to succeed. Where the wide range in development of individual five year olds has been ignored, kindergarten children have experienced academic failure (Werner, 1984). The push to teach more, faster, and earlier can ignore the realities of child growth and development (Judy, 1984). Finally, the full-day kindergarten is believed to cost more. Although these criticisms merit serious consideration, the lack of evidence to substantiate the problems is in sharp contrast to the research in support

of full-day programs for kindergarten children. Much of the criticism falls into the "what if ..." category that basically reveals a fear of low quality programs. This danger, however, is present for any educational program, regardless of the schedule used, and is not sufficient reason to ignore the evidence of positive effects and parental support for full-day kindergarten.

## Summary

Three basic types of kindergarten schedules are used in Illinois public schools: the half-day schedule, the alternate-day schedule, and the full-day schedule. Half-day kindergartens account for 87% of all kindergartens although their numbers have decreased in recent years. Alternate-day kindergartens have increased and account for 5% of all kindergartens. Full-day kindergartens have also increased and account for about 8% of all kindergartens. Approximately 84% of all kindergarten students attended public schools in 1983-84. About 16% attended nonpublic schools--an increase of 4% since 1979-80. Total enrollments in nonpublic kindergartens have increased 47% in the last five years, while public school kindergarten enrollments have increased 3%.

School district administrators and local board members may adopt an alternate-day or a full-day schedule for some or all of their schools for a variety of reasons. District administrators who adopt an alternate-day schedule believe that today's children are physically able to attend school all day without tiring, and that the additional time in school is of benefit to children. The advantages cited include more time to address the educational needs of children as well as reduced expenditures for mid-day transportation.

District administrators usually report adopting a full-day schedule for one or more of three reasons: to meet the needs of disadvantaged or readiness deficient students who can benefit from the extra support to prepare them for first grade, to provide an enrichment program for advanced or gifted children who are ready for a more advanced program, and to reduce transportation costs. They report that because many of today's pre-kindergarten children have had day care or nursery school experience, they are ready for a more extensive kindergarten experience. They state that the full-day program also reduces the need for children to fragment their day between school and day care when the parents are employed. It is also argued that the full-day program may encourage these parents to enroll their children in public rather than private schools. Finally, when given a choice, parents are reported to select full-day programs for their children.

Despite the fact that evidence to the contrary outweighs the evidence supporting their position, critics of the full-day schedule feel that five year olds may tire during an all-day schedule and that a half-day schedule is more appropriate for making the transition from home to school. Critics of the full-day schedule also feel that it may result in children being pushed into academics before they are developmentally ready for such an experience. The full-day schedule also costs more to operate in the short term--current state funding policy provides only one-half day financial support.

The patterns of kindergarten schedules in Illinois and the reasons reported by administrators for selecting a particular schedule have been described. However, the patterns may be reflective of tradition or historical practice in the large part, and the reasons for selecting particular schedules may reflect individual community, school, or administrators' viewpoints and beliefs. A review of the literature on kindergarten scheduling shows that there has been little or no difference in the academic or social outcomes between children who attend half-day programs and those who attend alternate-day programs (Stinard, 1982; Herman, 1984; Ulrey, et. al., 1982). The alternate-day schedule has not been shown to have a measurable positive effect on academic or social achievement, but neither has it had a detrimental effect when compared to the half-day schedule.

Research evidence is strongly supportive of full-day schedules, however. A comprehensive review by Stinard (1982) that included numerous studies from the 1970s reported that there were academic advantages in the full-day kindergartens. More recent research (DeRosia, 1980; Nieman and Gastright, 1981; Harman, 1982; Warjanka, 1982; Anderson, 1983; Hebbeler, 1983; Evansville-Vanderburgh School Corporation, 1983) has consistently found that children in full-day kindergartens have higher academic achievement levels and better readiness skills for first grade than do children who attend kindergartens with the other two schedules. Positive effects on social measures are described in several studies (Anderson, 1983; Evanston School District, 1983, 1984; Hebbeler, 1983; McClinton and Topping, 1981) but the evidence is tempered by studies where no differences in social competencies were observed between the children experiencing different kindergarten schedules (Stinard, 1982; Ulrey and Others, 1982; Evansville-Vanderburgh School Corporation, 1983).

The fatigue levels of young children are often thought to be a problem, but this has not been reported to be a problem once programs are implemented (Anderson, 1983; Evansville-Vanderburgh School Corporation, 1983; Salzar, 1982; Bay Shore Union Free School District, 1983). Parents are reported to be supportive of the full-day programs (Anderson, 1983; Evanston School District, 1983, 1984; Hebbeler, 1983; Evansville-Vanderburgh School Corporation, 1983; Salzar, 1982; Bay Shore Union Free School District, 1983) and choose them for their children if they are given a choice.

Concerns about the inability of children to adapt to a longer kindergarten day are further refuted by the large proportion of children (at least 50%) who have already experienced group instructional experiences prior to kindergarten entrance. This earlier preschool experience has created a need for a more comprehensive kindergarten program for some children and a need for more "readiness" experience by others without preschool experience. Both of these needs are more effectively addressed in a full-day program because of the increased time available for individual student programming.

A strong case can be stated for the academic advantages of a full-day schedule. A preponderance of studies provide evidence that the full-day kindergarten will have significant and positive effects on achievement. Although some groups, such as disadvantaged children or gifted children, appear to receive greater benefits from full-day programs, there is evidence that all children would receive more academic benefits from the full-day program than from the other types of kindergarten scheduling.

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